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(54) Title: **METHOD FOR PRODUCTION AND UPGRADING OF OIL**

(57) **Abstract:** An integrated process for production and upgrading of heavy and extra-heavy crude oil, comprising (a) reforming of hydrocarbons such as natural gas to produce hydrogen, CO₂ and steam (b) separating the produced hydrogen from the CO₂, steam and any other gases to give a hydrogen rich fraction and a CO₂ rich fraction and steam, (c) injecting the steam alone or in combination with the CO₂ rich fraction into a reservoir containing heavy or extra heavy oil to increase the oil recovery, and (d) upgrading/refining of the heavy or extra heavy oil to finished products by extensive hydroprocessing, comprising several steps of hydrocracking and hydrotreating (sulfur, nitrogen and metals removal as well as hydrogenation of olefins and aromatics), using the hydrogen rich fraction.

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